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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,864	08/06/2003	Donald R. Loveday	1999U026.US-CON3	2116
25959 7590 01/25/2008 UNIVATION TECHNOLOGIES LLC 5555 SAN FELIPE, SUITE 1950 HOUSTON, TX 77056			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 01/25/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/635,864

Applicant(s)

LOVEDAY ET AL.

Examiner

William K. Cheung

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-16, 18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-16, 18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. In view of amendment filed October 2, 2007, claims 13, 17, 19 have been cancelled. Claims 1-12, 14-16, 18, 20 are pending.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-12, 14-16, 18, 20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/772,823. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-12, 14-16,

18, 20 of instant application and claims 1-15 of copending Application No. 10/772,823 are related a genus and its species.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed November 2, 2007 have been fully considered but they are not persuasive. Applicants agree to file a terminal disclaimer when the claims are found allowable. Therefore, claims 1-12, 14-16, 18, 20 stand ODP rejected until a terminal disclaimer is filed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-12, 14-16, 18, 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Welborn, Jr. (US 5,124,418) for the reasons adequately set forth from paragraph 7 of the office action of June 29, 2007.

Welborn, Jr. (abstract; col. 16, line 21-40) discloses an olefin polymerization catalyst comprising at least one metallocene and at least one non-metallocene transitional metal compounds. Welborn, Jr. (col. 3, line 38-46; col. 9, line 42-59) discloses that the disclose catalyst can be used to prepared polyolefin with multi-modal molecular weight distribution which generically includes the "bimodal" feature as claimed. Welborn, Jr. (col. 5, line 34 to col. 8, line 56) clearly disclose a catalyst system that can give rise to residual zirconium or hafnium metal in the polyolefin product produced, despite that the catalyst can be recovered to some degrees (col. 9, line 16-24). Welborn, Jr. (col. 13, line 3-8) clearly disclose a range of transition metal content

the disclosed polymerization process ranges from 0.01 to 50 ppm, preferably ranges from about 0.1 to 3 ppm.

Welborn, Jr. (col. 10, line 54-60) indicates that the polyolefin produced are polymer blends of HDPE and ethylene-propylene copolymers.

Regarding the claimed weight average molecular weight, Welborn, Jr. (col. 16, line 41-68; col. 17, line 35, 55) discloses HDPE/ethylene-butene copolymer having a weight average molecular weight of 663,000. Regarding the claimed density, Welborn, Jr. (col. 16, line 67; col. 17, line 37, 57) discloses a density of 0.96 g/cc.

Regarding the claimed "Mw/Mn of from 20 to 60", Welborn, Jr. (col. 15, line 34-37) clearly indicates the range of Mw/Mn that can be prepared by the process disclosed.

In view of the substantially identical polymerization process, the type of monomers and comonomers used in the polymerization process, and the substantially identical molecular weight and molecular weight distribution, the examiner has a reasonable basis that the claimed residual amount of zirconium or hafnium metal, I_2 , I_{21}/I_2 , the notch tensile properties (ASTM-F1473), the aging property of claims 8-10, the MD tear properties, and the properties of the pipe (the predicted D-4 Tc for 110 mm

pipe....) made by the claimed bimodal polyethylenes are inherently possessed in Welborn, Jr. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Regarding the claimed "bis-amidic catalyst", applicants must recognize that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Response to Arguments

Applicant's arguments filed November 2, 2007 have been fully considered but they are not persuasive. Applicants argue that the amended claims are now allowable in view of the claimed "nitrogen containing ligand detectable by High Resolution Mass Spectroscopy (HRMS)". However, the examiner disagrees because Welborn, Jr. (col. 6, line 51; col. 12, line 12-15) clearly disclose a catalyst system comprising a nitrogen containing liquid or compounds. Although applicants argue that the amount of nitrogen

in the claimed bimodal polyethylene will be at least two times greater than the nitrogen from a bridge suggested by Welborn, applicants must recognize that the argued "amount" difference is not supported by the claims as written.

Although applicants argue that the claimed "bis-amidic catalyst" unexpectedly results polymers with improved short chain branching in the higher molecular weight component of the recited copolymer, Applicants fail to provide any comparative data to support such argument. Further, what does it mean by the argued "improved short chain branchings in the higher molecular weight component"? Does it mean more, or less, short chain branchings?

Regarding applicants' argument filed November 2, 2007, applicants sometimes refer the claimed invention as a process. Applicants must recognize that the claimed invention is "a bimodal polyethylene", not a process or a polyethylene pipe.

In view of the reasons set forth above, the 102-3 rejection set forth is maintained.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

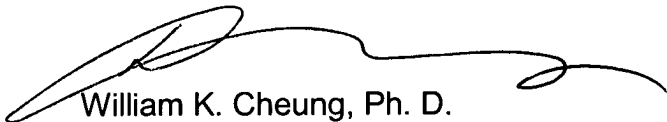
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

January 17, 2008

WILLIAM K. CHEUNG
PRIMARY EXAMINER